10/774,082
Restriction Search
L/Cook 9/19/06

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(FILE 'HOME' ENTERED AT 09:53:41 ON 19 SEP 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 09:53:59 ON 19 SEP 2006

L1	2893	S (ANTIBOD? PURIF?)
L2	6	S L1 AND (NET CHARGE)
L3	327	S L1 AND PH
L4	17	S L3 AND ISOELECTRIC?
L5	0	S L4 AND L2
L6	258	DUPLICATE REMOVE L3 (69 DUPLICATES REMOVED)
L7	258	S L6 AND PH
L8	0	S L2 AND PH
L9	3	DUPLICATE REMOVE L2 (3 DUPLICATES REMOVED)
L10	17	DUPLICATE REMOVE L4 (0 DUPLICATES REMOVED)

ANSWER 1 OF 3 • CAPLUS COPYRIGHT 2006 ACS on STN

1 date no good

AN 2000:187960 CAPLUS
DN 133:16029
ED Entered STN: 23 Mar 2000
TI Development of ion exchange chromatography methods for monoclonal antibodies
AU Bai, L.; Burman, S.; Gledhill, L.
CS Analytical Sciences Department, SmithKline Beecham Pharmaceuticals, King of Prussia, PA, USA
SO Journal of Pharmaceutical and Biomedical Analysis (2000), 22(3), 605-611
CODEN: JPBADA; ISSN: 0731-7085
PB Elsevier Science B.V.
DT Journal
LA English
CC 15-1 (Immunochemistry)
AB Monoclonal antibodies (MAbs) have been widely developed as biopharmaceutical agents to treat a number of diseases, such as asthma, arthritis, cancers, and multiple sclerosis, etc. MAbs are often found existing in multiple iso-forms with different net charges. These isoforms are evident as multiple bands on isoelec. focusing (IEF) gel anal. To isolate and study isoforms of proteins and monitor their distributions, many different techniques, such as slab gel electrophoresis, capillary electrophoresis (CE), ion exchange chromatog. (IEC), and hydrophilic interaction chromatog. (HIC) have been used. Compared with the other techniques, IEC has a larger selection of com. columns and is a potential nondenaturing preparative procedure to isolate the isoforms for subsequent characterization. However, due to the large mol. size of MAbs, successful separation of isoforms of MAbs by IEC is not often seen in publications. In this report the authors describe a systematic approach to develop IEC methods for MAbs. The authors used high efficient exchange resin, smaller internal diameter columns, and higher flow rate to achieve fast and high degree separation
ST monoclonal antibody purifn ion exchange chromatog; charge isoform antibody ion exchange chromatog
IT Immunoglobulins
RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)
(G1, monoclonal; purification and charge characterization of monoclonal antibodies by ion exchange chromatog.)
IT Immunoglobulins
RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)
(G4, monoclonal; purification and charge characterization of monoclonal antibodies by ion exchange chromatog.)
IT Ion exchange chromatography
(for purification and charge characterization of monoclonal antibodies)
IT 271798-33-5, Bio-Scale S 2 271798-84-6, Mini S-PE
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(for purification and charge characterization of monoclonal antibodies by ion exchange chromatog.)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; Federal Register 63 (1996) 31506-31513
(2) Artigues, A; J Biol Chem 1990, V265, P4853 CAPLUS
(3) Aswad, D; Deamidation and Isoaspartate Formation in Peptides and Proteins 1995
(4) Bonger, J; Int J Pept Protein Res 1992, V39, P364
(5) Cacia, J; Biochemistry 1996, V35, P1897 CAPLUS
(6) Cacia, J; J Chromatogr 1993, V634, P229 CAPLUS
(7) Denton, K; J Chromatogr B 1997, V697, P111 CAPLUS
(8) Donato, A; J Biol Chem 1993, V268, P4745
(9) Huang, T; Chromatographia 1994, V39, P543 CAPLUS
(10) Hunt, G; J Chromatogr A 1996, V744, P295 CAPLUS
(11) Kaltenbrunner, O; J Chromatogr 1993, V639, P41 CAPLUS
(12) Kwong, M; Protein Sci 1994, V3, P147 CAPLUS

(13) Lee, H; J Chromatogr A 1997, V790, P215 CAPLUS
(14) Liu, Q; J Liq Chromatogr Rel Technol 1997, V20, P707 CAPLUS
(15) Moorhouse, K; J Pharm Biomed Anal 1997, V16, P593 CAPLUS
(16) Righetti, P; J Chromatogr 1981, V220, P115 CAPLUS
(17) Shahrokh, Z; Pharm Res 1994, V11, P936 CAPLUS
(18) Tang, S; J Pharm Biomed Anal 1999, V19, P569 CAPLUS
(19) Teshima, G; Biochemistry 1991, V30, P3916 CAPLUS
(20) Teshima, G; J Biol Chem 1991, V266, P13544 CAPLUS
(21) Wu, S; J Chromatogr 1990, V516, P115 CAPLUS
(22) Yang, Y; J Chromatogr A 1996, V743, P171 CAPLUS

ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
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IT Immunoglobulins
RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)
(G1, monoclonal; purification and charge characterization of monoclonal antibodies by ion exchange chromatog.)
IT Immunoglobulins
RL: PRP (Properties); PUR (Purification or recovery); PREP (Preparation)
(G4, monoclonal; purification and charge characterization of monoclonal antibodies by ion exchange chromatog.)
IT Ion exchange chromatography
(for purification and charge characterization of monoclonal antibodies)
IT 271798-33-5, Bio-Scale S 2 271798-84-6, Mini S-PE
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(for purification and charge characterization of monoclonal antibodies by ion exchange chromatog.)
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(4) Bonger, J; Int J Pept Protein Res 1992, V39, P364
(5) Cacia, J; Biochemistry 1996, V35, P1897 CAPLUS
(6) Cacia, J; J Chromatogr 1993, V634, P229 CAPLUS
(7) Denton, K; J Chromatogr B 1997, V697, P111 CAPLUS
(8) Donato, A; J Biol Chem 1993, V268, P4745
(9) Huang, T; Chromatographia 1994, V39, P543 CAPLUS
(10) Hunt, G; J Chromatogr A 1996, V744, P295 CAPLUS
(11) Kaltenbrunner, O; J Chromatogr 1993, V639, P41 CAPLUS
(12) Kwong, M; Protein Sci 1994, V3, P147 CAPLUS

(13) Lee, H; J Chromatogr A 1997, V790, P215 CAPLUS
(14) Liu, Q; J Liq Chromatogr Rel Technol 1997, V20, P707 CAPLUS
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(16) Righetti, P; J Chromatogr 1981, V220, P115 CAPLUS
(17) Shahrokh, Z; Pharm Res 1994, V11, P936 CAPLUS
(18) Tang, S; J Pharm Biomed Anal 1999, V19, P569 CAPLUS
(19) Teshima, G; Biochemistry 1991, V30, P3916 CAPLUS
(20) Teshima, G; J Biol Chem 1991, V266, P13544 CAPLUS
(21) Wu, S; J Chromatogr 1990, V516, P115 CAPLUS
(22) Yang, Y; J Chromatogr A 1996, V743, P171 CAPLUS

ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:103876 CAPLUS

DN 116:103876

ED Entered STN: 20 Mar 1992

TI Subsetting of acetylcholine receptor-reactive antibodies by preparative isoelectric focusing

AU Thompson, Patrica A.; Krolick, Keith A.

CS Health Sci. Cent., Univ. Texas, San Antonio, TX, 78284, USA

SO Preparative Biochemistry (1991), 21(4), 229-35
CODEN: PRBCBQ; ISSN: 0032-7484

DT Journal

LA English

CC 15-1 (Immunochemistry)

AB The antibodies produced against most foreign antigens are composed of a family of Igs, a family composed of members that are of a number that often reflects the size/complexity of the mol. that stimulates their production In other words, such responses involve the activation of a polyclonal B lymphocyte population. The antibody products of the B cells, although all capable of binding the original antigen, bind at various immunogenic sites (epitopes) on that antigen. Such differences in antigen-binding fine specificity is determined by amino acid residues in the antibody variable region domains found associated with the antigen combining site and tend to have a complimentary biochem. with the mol. for which they are intended to interact. In addition to amino acid differences that dictate the isotypes and allotypes of antibody mols., differences in the amino acids that compose the variable regions can produce differences in net charge of particular antibody mols.; thus, families of polyclonal antibodies, all reactive with the same antigen but with different fine specificities, can be separated and as shown with acetylcholine receptor-reactive antibodies, purified based on their isoelec. points by preparative isoelec. focusing (pIEF).

ST acetylcholine receptor antibody sepn isoelec focusing

IT Isoelectric focusing
(antibody separation by)

IT Antibodies
RL: PROC (Process)
(to acetylcholine receptor, separation of, by preparative isoelec. focusing)

IT Receptors
RL: BIOL (Biological study)
(cholinergic, antibodies to, separation of, by preparative isoelec. focusing)

ANSWER 7 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:609247 CAPLUS
DN 123:30814
ED Entered STN: 14 Jun 1995
TI Purification of antibodies by zeolite A
AU Huang, Y. C.; Yu, Y. C.; Lee, T. Y.
CS Dep. Chem. Eng., Natl. Tsing Hua Univ., Hsinchu, Taiwan
SO Enzyme and Microbial Technology (1995), 17(6), 564-9
CODEN: EMTED2; ISSN: 0141-0229
PB Elsevier
DT Journal
LA English
CC 15-1 (Immunochemistry)
Section cross-reference(s): 16
AB Zeolite A and its modified forms can be used to sep. IgG from a mixture of plasma proteins and mouse ascites fluid. The separation was achieved by adjusting the pH of buffers according to the isoelec. points of proteins in the mixture Zeolite A with potassium cations (K-A) and its calcium phosphate modified form (CaP-A) performed better than those with sodium, ammonium cations, and dealuminated zeolite X, resp. Antibody fractionation eluted from zeolite A columns showed high activity and purity, which were verified by SDS-PAGE and ELISA.
ST antibody purifn zeolite A
IT Ascitic fluid
(purification of antibodies by ascites fluid by zeolite A and modified forms)
IT Zeolites, uses
RL: NUU (Other use, unclassified); USES (Uses)
(purification of antibodies by ascites fluid by zeolite A and modified forms)
IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(purifn. of antibodies by zeolite A and modified forms)
IT Zeolites, uses
RL: NUU (Other use, unclassified); USES (Uses)
(A, purification of antibodies by ascites fluid by zeolite A and modified forms)
IT Zeolites, uses
RL: NUU (Other use, unclassified); USES (Uses)
(KA, purification of antibodies by ascites fluid by zeolite A and modified forms)
IT Zeolites, uses
RL: NUU (Other use, unclassified); USES (Uses)
(NH4A, purification of antibodies by ascites fluid by zeolite A and modified forms)
IT Zeolites, uses
RL: NUU (Other use, unclassified); USES (Uses)
(NaA, purification of antibodies by ascites fluid by zeolite A and modified forms)
IT Zeolites, uses
RL: NUU (Other use, unclassified); USES (Uses)
(X, purification of antibodies by ascites fluid by zeolite A and modified forms)
IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hepatitis B surface, antibodies to; purification of antibodies by zeolite A and modified forms)

ANSWER 8 OF 17 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:739415 CAPLUS
DN 123:141061
ED Entered STN: 16 Aug 1995
TI Purification of antibody Fab fragments by cation-exchange chromatography and pH gradient elution
AU Mhatre, R.; Nashabeh, W.; Schmalzing, D.; Yao, X.; Fuchs, M.; Whitney, D.; Regnier, F.
CS PerSeptive Biosystems, 500 Old Connecticut Path, Framingham, MA, 01701, USA
SO Journal of Chromatography, A (1995), 707(2), 225-31
CODEN: JCRAEY; ISSN: 0021-9673
PB Elsevier
DT Journal
LA English
CC 15-1 (Immunochemistry)
AB The use of a pH gradient as opposed to conventional salt gradient for elution in cation-exchange chromatog. was explored. PH gradients were very effective in separating Fab fragments and other proteins with differences in isoelec. point as low as 0.1. To determine the efficiency of purification, the separated peaks were collected and further analyzed by capillary electrophoresis.
ST antibody Fab fragment purifn cation chromatog
IT Antibodies
RL: PUR (Purification or recovery); PREP (Preparation)
(purifn. of antibody Fab fragments by cation-exchange chromatog. and pH gradient elution)
IT Chromatography, column and liquid
(cation-exchange, purification of antibody Fab fragments by cation-exchange chromatog. and pH gradient elution)

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FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 09:53:59 ON 19 SEP 2006

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L2	6	S L1 AND (NET CHARGE)
L3	327	S L1 AND PH
L4	17	S L3 AND ISOELECTRIC?
L5	0	S L4 AND L2
L6	258	DUPLICATE REMOVE L3 (69 DUPLICATES REMOVED)
L7	258	S L6 AND PH
L8	0	S L2 AND PH
L9	3	DUPLICATE REMOVE L2 (3 DUPLICATES REMOVED)
L10	17	DUPLICATE REMOVE L4 (0 DUPLICATES REMOVED)